

*Aga.*  
*Bugasov.*  
*Bezdezhnykh.*

September 12, 1986

MEMORANDUM FOR THE RECORD

SUBJECT: Discussion with Dr. Matthew Messelsen, Harvard University

Dr. Messelsen had recently (about 23 August 1986) returned from a visit to Moscow, Ministry of Health (3 days) where he met with four doctors all of whom were involved in treating patients during an outbreak of anthrax in Sverdlovsk in April 1979. He was invited by and his trip was fully supported by the USSR Ministry of Health.

Dr. Messelsen did not visit Sverdlovsk, he was briefed only in Moscow. He opened his discussion with the statement that anthrax is endemic in Sverdlovsk (attached papers Nos 1 & 4). He further stated that over 2 million people are inoculated against anthrax each year (mostly butchers) with a live encapsulated strain. Immunity develops in 12 to 14 days and lasts for 1 year but does not preclude cutaneous anthrax.

With regard to Sverdlovsk, he stated that a large outbreak occurred in the spring of 1979 with 96 cases and 64 deaths. The first case occurred on April 4 and the last on May 18. Eleven cases were cutaneous, six were cutaneous leading to systemic and all 17 survived. Of the remaining 79, all were gastric anthrax cases and 64 died for 81 percent fatalities.

He was told that 1979 was an unusually wet year and fodder for animal feed was short. To increase meat production, fodder was supplemented with meat bone flesh powder (assumed to be bone meal by U.S.). He explained that anthrax cases have been identified as caused by bone meal. In this case there are about 11 producers of bone meal. One facility 16 km south of Sverdlovsk produced one 29 ton lot which was responsible for this outbreak. The lot was put on sale on 25 March and all sold by 29 March to private animal owners. Anthrax was isolated from this lot of bone meal powders and victims and by capsule morphology and virulence in white mice was ascertained to be the same microorganism. Sheep and some cows were infected and he estimated that hundreds to thousands of people ate the contaminated meat. The animal sites were destroyed by open air burning of the buildings.

In addition 300 street dogs were sacrificed with two dogs infected. Chloramine was used extensively as a decontaminant. Leaflets, dated 14 April (attachment No. 6) were distributed warning of risk of contracting anthrax from consumption of uninspected meat.

According to Dr. Messelsen all patients from this outbreak were treated at one hospital, City Hospital No 40. The incidence of admittance to the hospital was as follows beginning on 4 April and ending on 18 May: 5/5/5/7/7/6/10/9/7/5/4/4/1/0/0/1. In addition 67 percent of the cases were male, 70 percent lived in the southern half of Sverdlosk, and most cases (32) were between the ages of 40 to 49. No cases occurred in the same household, no cases involved restaurants, and there was no military involvement. Thirty percent of cases involved workers from a ceramics factory which employed about 3000 workers. Between April 8 and 15 cattle carcasses from private sources were received and offered for sale at the factory to the workers. Only one carcass was infected with anthrax. He further stated that the incidence of disease was higher in truck and auto drivers who were thought to be more mobile and thus able to buy meat first.

As regards symptomology, Dr. Messelson reported he was told blockage of the intestine was the first symptom followed by chills, high fever (39°-41°), dyspnea, rapid pulse, cyanosis, and death. In some cases the temperature dropped rapidly immediately before death. All victims reported some stomach pain. The first diagnosis was made on April 7 and the first laboratory test on April 10. Extensive treatment was reported, mostly with a wide variety of broad spectrum antibiotics which included penicillin and serum fractions. All 96 cases were thought to be from animals who ate contaminated bone meal. Although he had no autopsy information he had been provided one photograph of a victim which he had turned over to government officials. He was told autopsies indicated hemorrhage in the intestine, swollen intestine with severe hemorrhage all over, lymph nodes hemorrhaged, and lungs free of hemorrhage. Some victims died at 48 hours after onset of illness; some lived up to 4 days. The causative organism was reported to be a thick capsule strain of anthrax. Survivors all felt fine two years after illness. No information was reported on burial or treatment of bodies of victims.

He reports a list of all foreign visitors is available and provided a trip report (attachment 7) by Prof Donald Ellis (which has been available in the U.S. for several years). Professor Ellis reports no unusual activity in Sverdlosk even though he reportedly arrived on 6 or 7 April, stayed about one month, visited Novosibirsk for one month, then returned to Sverdlosk for another month. Dr. Messelson also was provided in Moscow a pamphlet which was supposedly distributed in Sverdlosk at this time (attachment 6).

Dr. Messelson is planning three actions: a follow on visit of specialists from the U.S. to Moscow; the four doctors he had discussions with will be brought here to lecture; and that a scientific paper they are preparing will be translated and he will arrange for publication in an American journal.